

ABSTRACT OF THE DISCLOSURE

A system and method corrects luminance non-uniformity and increases the apparent amplitude resolution of an image generated by a projector. The projector, ~~which has~~ having a given number of stated levels, receives input data and projects images based on that ~~input~~ data. To correct luminance non-uniformity, a projector correction look-up table (LUT) is created. The LUT attenuates the displayed image such that the whole image, ~~assuming it has a uniform level,~~ has the same luminance as the dimmest point. Input data received by the projector is modified by ~~the~~ correction information contained in the LUT. ~~In addition, the output of the~~ The projector output is analyzed to identify the number of unique levels that the projector is capable of producing, which may be less than the number of stated levels. A dithering engine ~~is utilized to further modify~~ modifies the corrected image data to increase the projector's amplitude resolution, ~~thereby creating the illusion that of~~ the projector has having more than the limited number of unique levels ~~that were~~ identified.